

Favorable action on the merits is solicited.

Respectfully submitted,

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SPECIFICATION

Method for Removing N-terminal Methionine
This application is a 371 of PCT/JP99/05456 filed October 4, 1999.

FIELD OF THE INVENTION

5 This invention relates to a method for the efficient removal, from peptides (including proteins) or salts thereof which possess an optionally oxidized N-terminal methionine residue or diketone of said methionine residue, of the N-terminal methionine 10 residue or the diketone of said methionine residue, in the presence of acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate; and to a method for manufacturing peptides or salts thereof which do not possess an optionally 15 oxidized N-terminal methionine residue or diketone of said methionine residue.

BACKGROUND ART

When protein is biosynthesized within a cell, its 20 N-terminal is known to start with methionine, which corresponds to the initiation codon AUG of the mRNA. However, as this methionine is removed by subsequent processing, it is usually no longer present in the completed mature protein molecule.

25 With advancements in recombinant DNA techniques, it has become possible to produce useful proteins using microorganisms and/or animal cells, for example *Escherichia coli*. There have been instances wherein protein produced via this type of method was found to 30 retain a residue comprised of the aforementioned methionine. For example, the retention rate of methionine was as high as approximately 100% in human growth hormone expressed in *E. coli* [Nature, 293, 408 (1981)], and 50% in interferon- α [J. Interferon Res., 1, 35 381 (1981)], while in nonglycosylated human interleukin-2 the presence of a molecular species with